CLAIMS

1. An analytical apparatus for automatically carrying out a plurality of analytical steps, which apparatus includes:
a releasing device for releasing a sample from a sampling tube;
a device for analysing a first portion of the released sample;
a collecting device for collecting a second portion of the released sample;
a device for re-releasing the collected said second portion of the sample; and
a device for analysing the re-released portion of the sample.

2. An analytical apparatus according to claim 1, which is arranged to select the sampling tube from a plurality of tubes stored in an autosampler.

3. An analytical apparatus according to claim 1 or 2, which is arranged to provide a comparison of the results from each of the two analysis stages.

4. An analytical apparatus according to any preceding claim, wherein the second portion of the sample released from each sampling tube is collected either in the sampling tube itself or in a separate collecting tube or trap.

5. An analytical apparatus according to claim 4, wherein a single collecting tube or trap is used to collect, in turn, the second portion of the sample released from each of a plurality of sampling tubes.

6. An analytical apparatus according to claim 4, wherein respective collecting tubes are used to collect the second portion of each of the released samples.

7. An analytical apparatus according to claim 6, wherein each of said respective collecting tubes are selected automatically from a plurality of tubes stored either in the same autosampler as the sampling tubes or in a further autosampler.

8. An analytical apparatus according to any preceding claim, wherein a portion of the re-released sample is analysed, a second portion of the re-released sample being re-collected, either in the sampling tube or in a further respective re-collecting tube, each of said respective re-collecting tubes being selected automatically from a plurality of tubes stored either in the same autosampler as the sampling tubes and/or collecting tubes or in a further autosampler.

9. An analytical apparatus according to any preceding claim, arranged such that the sample released from the sampling tube is buffered, by collecting the sample in an intermediate tube or trap, prior to the steps of analysing the first portion of the released sample and collecting the second portion of the released sample.

10. An analytical apparatus according to any of claims 1 to 8, wherein the second portion of the sample released from the sampling tube, or subsequently collected and re-released, are buffered, by collecting the sample in an intermediate tube or trap, prior to its collection/re-collection.

11. An analytical apparatus comprising means for

automatically carrying out, for each of a plurality of sampling tubes stored in an autosampler, the steps of: selecting a sampling tube from said plurality of tubes; releasing a sample from the sampling tube; analysing a first portion of the released sample; collecting a second portion of the released sample, either in the sampling tube or in a collecting tube selected from said plurality of tubes, with which said first tube is replaced in the autosampler.

12. An apparatus according to claim 11, which further comprises means for automatically carrying out the further steps of releasing the sample collected in either the sampling tube or the collecting tube and analysing the released sample.

13. An apparatus according to claim 11 or 12, which is arranged to analyse only a first portion of the sample released by said collecting means, a second portion of the released sample being re-collected, either in the sampling tube, the collecting tube or in a re-collecting tube selected from said plurality of tubes, with which either the sampling tube or the collecting tube is replaced in the autosampler.

14. An apparatus according to any of claims 11 to 13, wherein for each of the plurality of sampling tubes, the sample released from the sampling tube is buffered, by collecting the sample in a tube or trap, prior to the steps of analysing the first portion of the released sample and collecting the second portion of the released sample.

15. An apparatus according to any of claims 11 to 13, wherein the second portion of the sample released from

the sampling tube or by the collecting means may be buffered, by collecting the sample in a tube or trap, prior to its collection/re-collection.

16. An automated analytical method which includes:
releasing a sample from a sample tube;
analysing a first portion of the released sample;
collecting a second portion of the released sample;
re-releasing the collected second portion of the sample; and
analysing the re-released portion of the sample.

17. A method according to claim 16, wherein the sampling tube is selected from a plurality of tubes stored in an autosampler.

18. A method according to claim 16 or 17, wherein the second portion of the sample released from each sampling tube is collected either in the sampling tube, or in a separate collecting tube or trap.

19. A method according to any of claims 16 to 18, wherein a portion of the re-released sample is analysed, a second portion of the re-released sample being re-collected, either in the sampling tube or in a further respective re-collecting tube, each of said respective re-collecting tubes stored either in the same autosampler as the sampling tubes and/or collecting tubes, or in a further autosampler.

20. A method according to any of claims 16 to 19, wherein the sample released from the sampling tube is buffered, typically by collecting the sample in an intermediate tube or trap, prior to the steps of analysing the first portion of the released sample and collecting the

second portion of the released sample.

21. A method according to any of claims 16 to 19, wherein the second portion of the sample released from the sampling tube, or subsequently collected and re-released, may be buffered, typically by collecting the sample in an intermediate tube or trap, prior to its collection/recollection.